To: 'Anurag Mishra'[Anurag.Mishra@respec.com]; 'Paul, Sabu'[SPaul@mbakerintl.com]

**Cc:** 'Tony Donigian'[Tony.Donigian@respec.com]

From: Shaikh, Taimur

Sent: Thur 3/1/2018 6:28:57 PM

Subject: RE: EXTERNAL: RE: Reduction scenario results for EFDC

72% it is.

Thanks Anurag.

Taim.

Taimur A. Shaikh, Ph.D.

Assessment, Listing, and TMDL Section (6WQ-PT)

Water Division | EPA Region 6



From: Anurag Mishra [mailto:Anurag.Mishra@respec.com]

Sent: Wednesday, February 28, 2018 11:54 PM

To: Paul, Sabu; Shaikh, Taimur

Cc: Tony Donigian

Subject: RE: EXTERNAL: RE: Reduction scenario results for EFDC

With 72% Global Reduction, the max of 30-day Geomean at state line is 0.0373mg/L. With 73% Global Reduction, the max of 30-day Geomean at state line is 0.0363mg/L.

Depending upon the number of significant digits we are looking at, we can select 72 or 73% Global Reduction.

~A

## **ANURAG MISHRA**

650.962.1864 office // 650.395.7224 cell

From: Paul, Sabu [mailto:SPaul@mbakerintl.com]
Sent: Wednesday, February 28, 2018 7:33 AM

To: Anurag Mishra < Anurag. Mishra@respec.com >; Shaikh Taimur < Shaikh. Taimur@epa.gov >

Cc: Tony Donigian <Tony.Donigian@respec.com>

Subject: RE: EXTERNAL: RE: Reduction scenario results for EFDC

Anurag,

Thanks for sending these files. I am guessing we are running these with the 2015 point sources. Should we run the model with point sources at their permit level with design flow? Do you know how they compare – I mean the 2015 load and flow versus the permit/design flow?

Regards,

Sabu.

From: Anurag Mishra [mailto:Anurag.Mishra@respec.com]

Sent: Tuesday, February 27, 2018 6:56 PM

To: Paul, Sabu <SPaul@mbakerintl.com>; Shaikh Taimur <Shaikh.Taimur@epa.gov>

**Cc:** Tony Donigian < Tony.Donigian@respec.com>

Subject: RE: EXTERNAL: RE: Reduction scenario results for EFDC

Sabu

The EFDC output for the two scenarios is attached. Both folders have respective UCI files in them as well.

Thanks

~A

## **ANURAG MISHRA**

650.962.1864 office // 650.395.7224 cell

From: Paul, Sabu [mailto:SPaul@mbakerintl.com]

Sent: Tuesday, February 27, 2018 1:12 PM

To: Anurag Mishra <Anurag. Mishra@respec.com>; Shaikh Taimur <Shaikh. Taimur@epa.gov>

Cc: Tony Donigian < Tony. Donigian@respec.com >

Subject: RE: EXTERNAL: RE: Reduction scenario results for EFDC

Anurag,

Please go ahead and generate the results for 75/99 scenario also.

Regards, Sabu.

From: Anurag Mishra [mailto:Anurag.Mishra@respec.com]

Sent: Tuesday, February 27, 2018 3:42 PM

To: Paul, Sabu <<u>SPaul@mbakerintl.com</u>>; Shaikh Taimur <<u>Shaikh.Taimur@epa.gov</u>>

**Cc:** Tony Donigian < Tony. Donigian@respec.com >

**Subject:** EXTERNAL: RE: Reduction scenario results for EFDC

Sabu/Taim/Tony

I updated the table with the violation frequency for the baseline values as well.

Sabu, I generated the EFDC results for the scenario with 75% global reductions. Tony will QA/QC that run and I will send it to you after that.

Thanks

~A														
		max(30-day GeoMean) for TP Concentration [Standard is 0.037 mg/l]												
DSN ID	Loc atio n	Location Name	Sta te	Baseli ne (Sim0 )	Frequ ency of Viola tions	Perce nt Viola tions	69% Glob al Redu ction (Sim1	Frequ ency of Viola tions	Perce nt Viola tions	75% Glob al Redu ction	Frequ ency of Viola tions	Perce nt Viola tions	75% AR Redu ction and 90% OK Redu ction)	
6320	630	Illinois River at State Line	AR	0.119	6527	99.7	0.040	17	0.3	0.034	0	0.0	0.034	
9635	635		ОК	0.119	6527	99.7	0.040	17	0.3	0.034	0	0.0	0.034	
9637	637		ОК	0.121	6510	99.5	0.041	13	0.2	0.035	0	0.0	0.035	
6420	640		ОК	0.121	6518	99.6	0.041	17	0.3	0.035	0	0.0	0.035	
9650	650		ОК	0.123	6513	99.5	0.042	19	0.3	0.036	0	0.0	0.035	
9660	660		ОК	0.129	6521	99.6	0.045	59	0.9	0.039	3	0.0	0.037	
9670	670		ОК	0.133	6518	99.6	0.047	70	1.1	0.040	5	0.1	0.038	
9800	800		ОК	0.144	6536	99.8	0.050	166	2.5	0.043	16	0.2	0.039	
9810	810		ОК	0.145	6536	99.8	0.051	165	2.5	0.043	20	0.3	0.039	
9820	820		ОК	0.146	6535	99.8	0.051	165	2.5	0.044	22	0.3	0.039	
9830	830		ОК	0.147	6536	99.8	0.052	188	2.9	0.045	31	0.5	0.040	
9840	840		ОК	0.150	6536	99.8	0.053	185	2.8	0.046	36	0.5	0.040	
9850	850		ОК	0.153	6536	99.8	0.055	233	3.6	0.047	48	0.7	0.041	
9860	860		ОК	0.159	6540	99.9	0.060	406	6.2	0.052	115	1.8	0.046	
8690	870	Illinois River at Tahlequah	ОК	0.165	6539	99.9	0.062	429	6.6	0.054	134	2.0	0.047	
9880	880		ОК	0.170	6540	99.9	0.064	502	7.7	0.056	165	2.5	0.049	
9890	890		ОК	0.174	6541	99.9	0.066	607	9.3	0.058	186	2.8	0.049	

## **ANURAG MISHRA**

650.962.1864 office // 650.395.7224 cell

From: Anurag Mishra

Sent: Monday, February 26, 2018 3:59 PM

To: 'Paul, Sabu' <<u>SPaul@mbakerintl.com</u>>; 'Shaikh Taimur' <<u>Shaikh.Taimur@epa.gov</u>>

**Cc:** Tony Donigian < <u>Tony.Donigian@respec.com</u>> **Subject:** RE: Reduction scenario results for EFDC

Sabu

I will apply the 75% Global Reduction and generate the output. In the meanwhile, please find the Scenario Comparisons with the frequency of violations as you requested last week. Let me know if you need me to send the whole workbook.

**Thanks** 

- 1			max(30-day GeoMean) for TP Concentration [Standard is 0.037 mg/l]												
DSN ID	Loca tion	Location Name	Sta te	Basel ine (Sim0 )	69% Glob al Redu ction (Sim1	Frequ ency of Violat ions	Perce nt Viola tions	75% Glob al Redu ction	Frequ ency of Violat ions	Perce nt Viola tions	75% AR Reduc tion and 90% OK Reduc tion)	Frequ ency of Violat ions	Perce nt Viola tions		
6320	630	Illinois River at State Line	AR	0.119	0.040	17	0.3	0.034	0	0.0	0.034	0	0.0		
9635	635	1	ОК	0.119	0.040	17	0.3	0.034	0	0.0	0.034	0	0.0		
9637	637	,	ОК	0.121	0.041	13	0.2	0.035	0	0.0	0.035	0	0.		
6420	640		ОК	0.121	0.041	17	0.3	0.035	0	0.0	0.035	0	0.		
9650	650		ОК	0.123	0.042	19	0.3	0.036	0	0.0	0.035	0	0.		
9660	660		ОК	0.129	0.045	59	0.9	0.039	3	0.0	0.037	1	0.		
9670	670		ОК	0.133	0.047	70	1.1	0.040	5	0.1	0.038	2	0.		
9800	800		ОК	0.144	0.050	166	2.5	0.043	16	0.2	0.039	3	0.		
9810	810		ОК	0.145	0.051	165	2.5	0.043	20	0.3	0.039	3	0.		
9820	820		ОК	0.146	0.051	165	2.5	0.044	22	0.3	0.039	3	0.		
9830	830		ОК	0.147	0.052	188	2.9	0.045	31	0.5	0.040	4	0.		
9840	840		ОК	0.150	0.053	185	2.8	0.046	36	0.5	0.040	4	0.		
9850	850		ОК	0.153	0.055	233	3.6	0.047	48	0.7	0.041	4	0.		
9860	860		ОК	0.159	0.060	406	6.2	0.052	115	1.8	0.046	32	0		
8690	870	Illinois River at Tahlequah	ОК	0.165	0.062	429	6.6	0.054	134	2.0	0.047	45	0		
9880	880		ОК	0.170	0.064	502	7.7	0.056	165	2.5	0.049	62	0		

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9890	890	ОК	0.174	0.066	607	9.3	0.058	186	2.8	0.049	71	1.1

## **ANURAG MISHRA**

650.962.1864 office // 650.395.7224 cell

From: Paul, Sabu [mailto:SPaul@mbakerintl.com]

**Sent:** Monday, February 26, 2018 6:56 AM

To: Anurag Mishra < Anurag. Mishra@respec.com > Cc: Tony Donigian < Tony. Donigian@respec.com > Subject: Reduction scenario results for EFDC

Hi Anurag,

Please export the HSPF results for EFDC model corresponding to Scenario 4 (75% reduction) meeting the standards at the Stateline.

Let me know when it is ready.

Regards,

Sabu.

Sabu Paul, Ph.D, P.E., PMP

Senior Technical Manager Michael Baker International 9400 Innovation Drive, Suite 110 | Manassas, VA [O] 703-334-4917 | [M] 571-606-3705

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